



## Break Bulk on Container Vessel:

The other answer to your need

*A presentation for*



# Break Bulk on Container Vessel: The other answer to your need

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## Summary:

**Chapter 1** – Introduction to Breakbulk Cargo on Container Vessel

**Chapter 2** – Stowing and Securing of the Cargo on-board

**Chapter 3** – Loading Procedures – Gears & Lifting Tools

**Chapter 4** – Planning the process – Safety Considerations (Method Statement)

**Chapter 5** – Advantages & Limitations of Breakbulk on Container Vessel

**Chapter 6** – Breakbulk on Container Vessel – Lifting & Stowage Pictures

**Chapter 7** – Q&A











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# Chapter 1 – Introduction to Breakbulk Cargo on Container Vessel

## Industry Foot Print ->

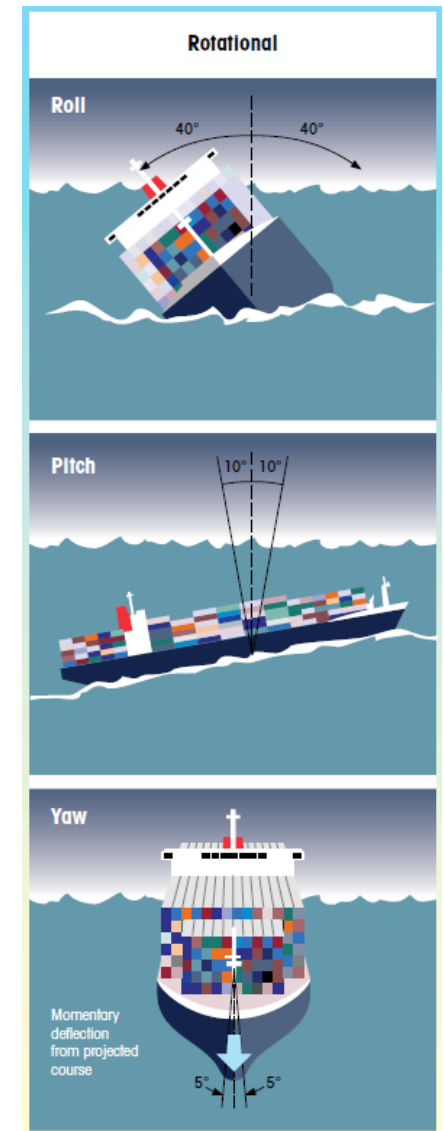
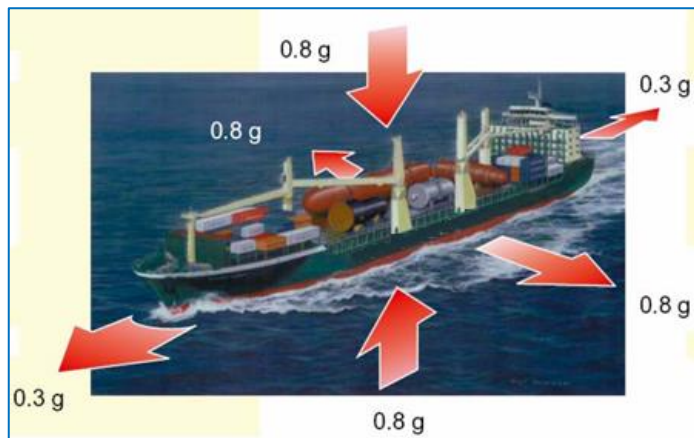
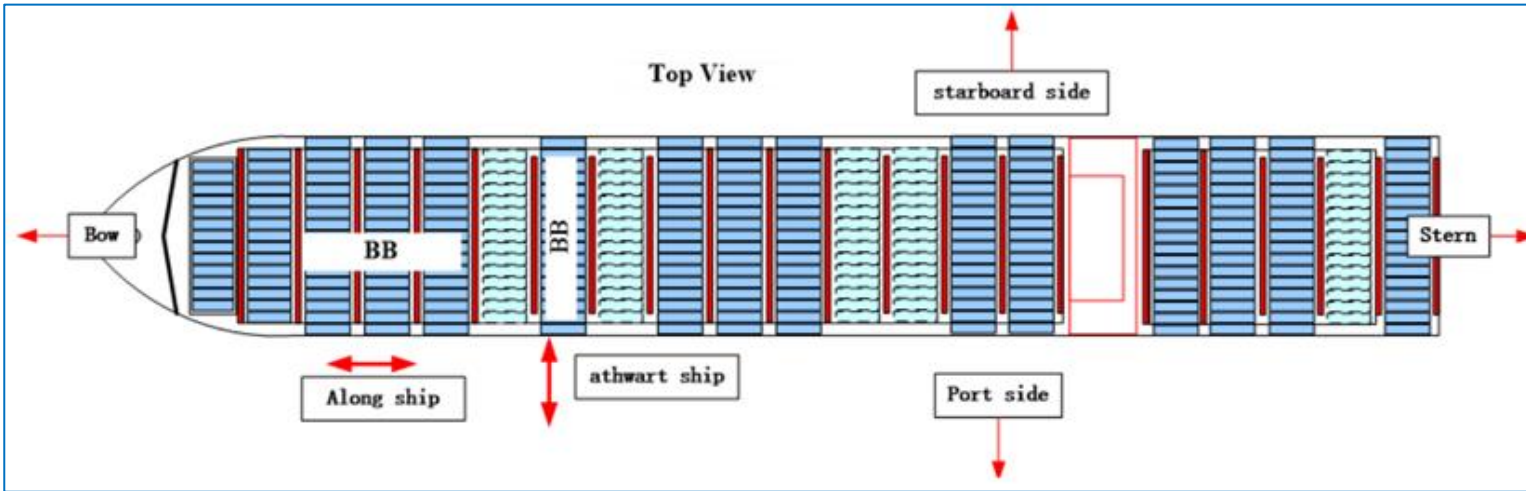
Yachts & Boats	Renewables	Power	Rail	Mining	Oil & Gas	Aeronautics	Equipment
							
Leisure boats Racing yachts Trimaran Tugs, pilot boats	Turbines nacelle components Wind blades	Transformer Generator Gear box	Rail cars Locomotives Panels	Vehicles EPCs cargos	Xmas Trees Pipes Pumps	Helicopters Fuselage Boarding bridges	Crates Paper Machinery

## Project Cargo Container Shipping Line Structure ->



# Chapter 2 – Stowing and Securing of the Cargo on-board

## Under-Deck Stowage – Along Ship or Athwart Ship



## Chapter 2 – Stowing and Securing of the Cargo on-board

### Under-Deck Stowage – Along Ship or Athwart Ship

#### Under-Deck Stowage - Along Ship



“Space Efficient” only for cargo with limited length

#### Under-Deck Stowage - Athwart Ship

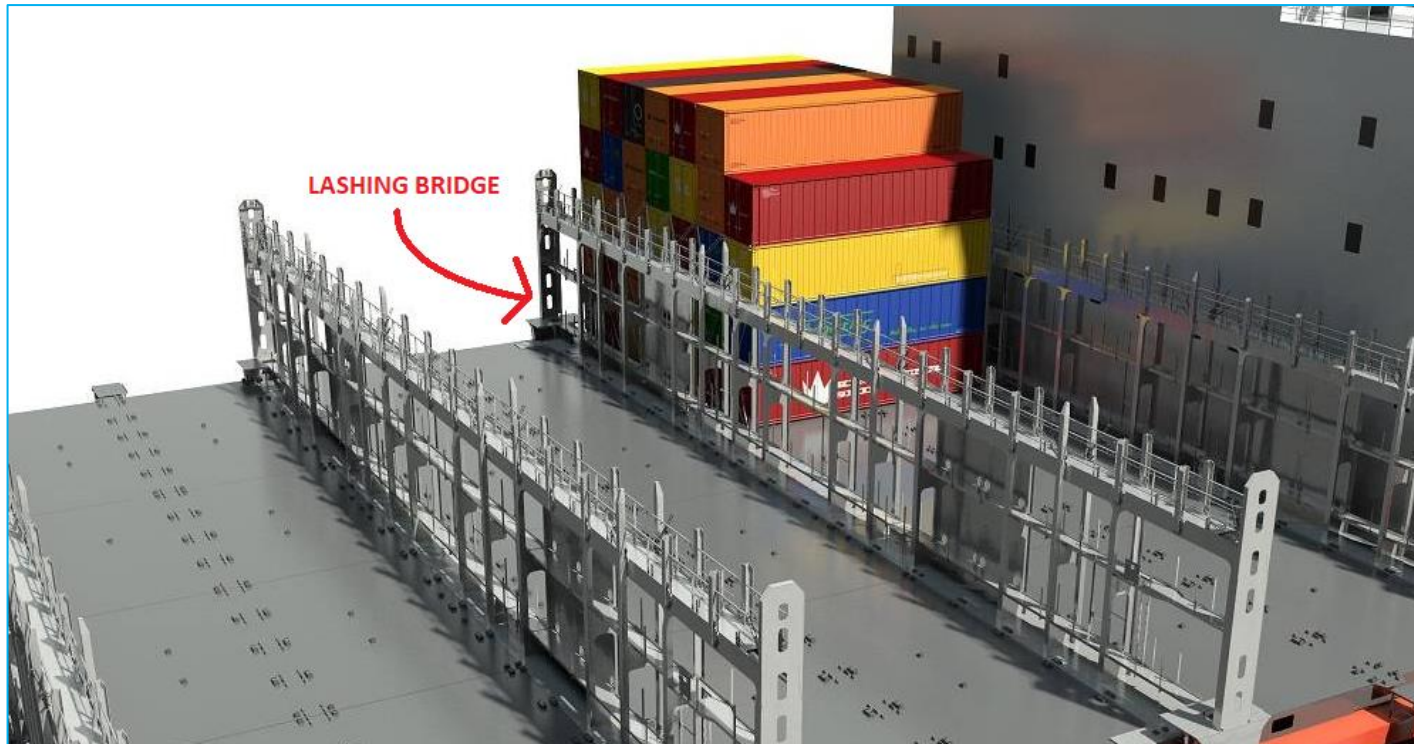


Stowage preferred in majority of BBK shipments

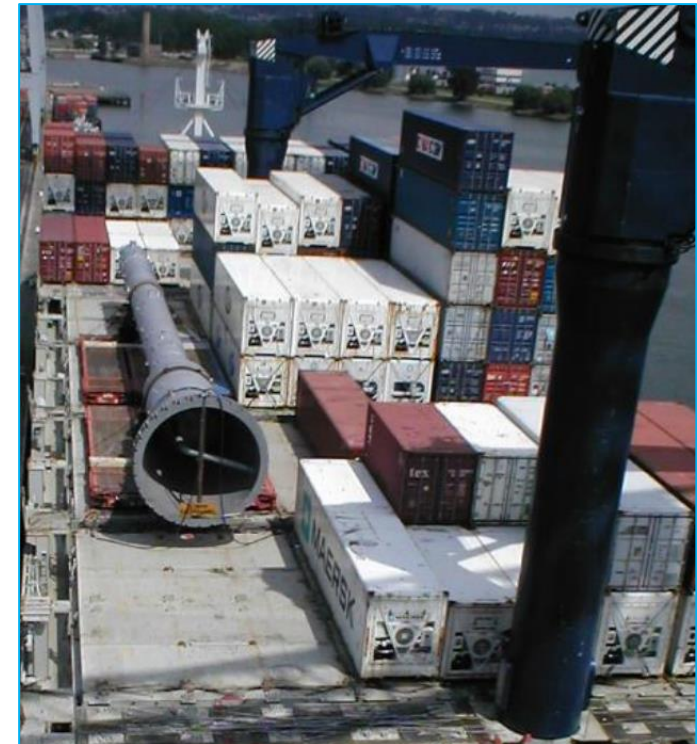
## Chapter 2 – Stowing and Securing of the Cargo on-board

### On-Deck Stowage – Along Ship or Athwart Ship

- ✓ Only sub. Client confirmation;
- ✓ If length of vessel hold in loading Athwart is not enough;
- ✓ Will usually work on smaller vessel which are not equipped of lashing bridges;
- ✓ On-Deck Proposed also in case under-deck full;



BBK loaded on-deck alongship



## Chapter 2 – Stowing and Securing of the Cargo on-board

Standard Stowage:  
Always on bed of 40FRs



For Heavy-Lifts:  
**Sandwich Beds** (+50% Payload + Increase Lashing Points)

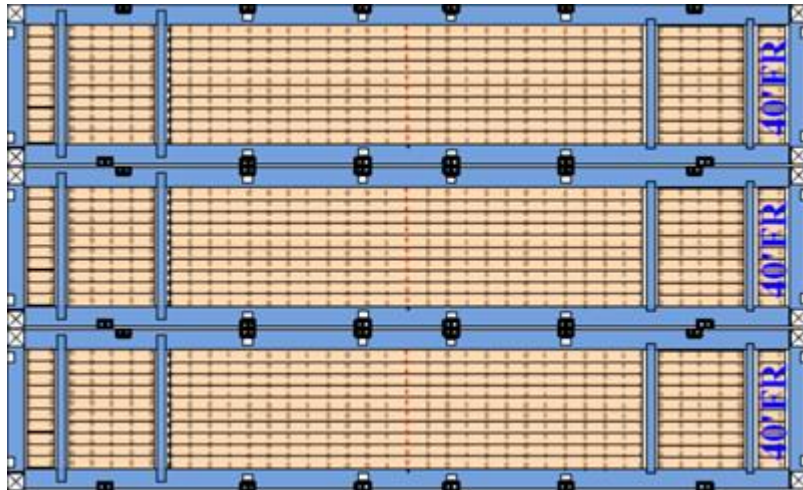


## Chapter 2 – Stowing and Securing of the Cargo on-board

### Lashing Points:

12 to 19 Lashing Points @5mtons SWL longitudinal  
Ttl 4 Lashing Points @5mtons SWL aft & rear

Min. 28x5mtons = 140Mtons MSL per 40FR  
Max. 42x5mton= 210Mtons MSL per 40FR



Example: On a bed of 3x40FRs Heavy-Duty  
**Theoretical** Max. MSL : 630MTONS

### Lashing Gears:

5Mtons SWL Nylon Belts  
(No D-Ring/Stopper Welding on Container Ships)

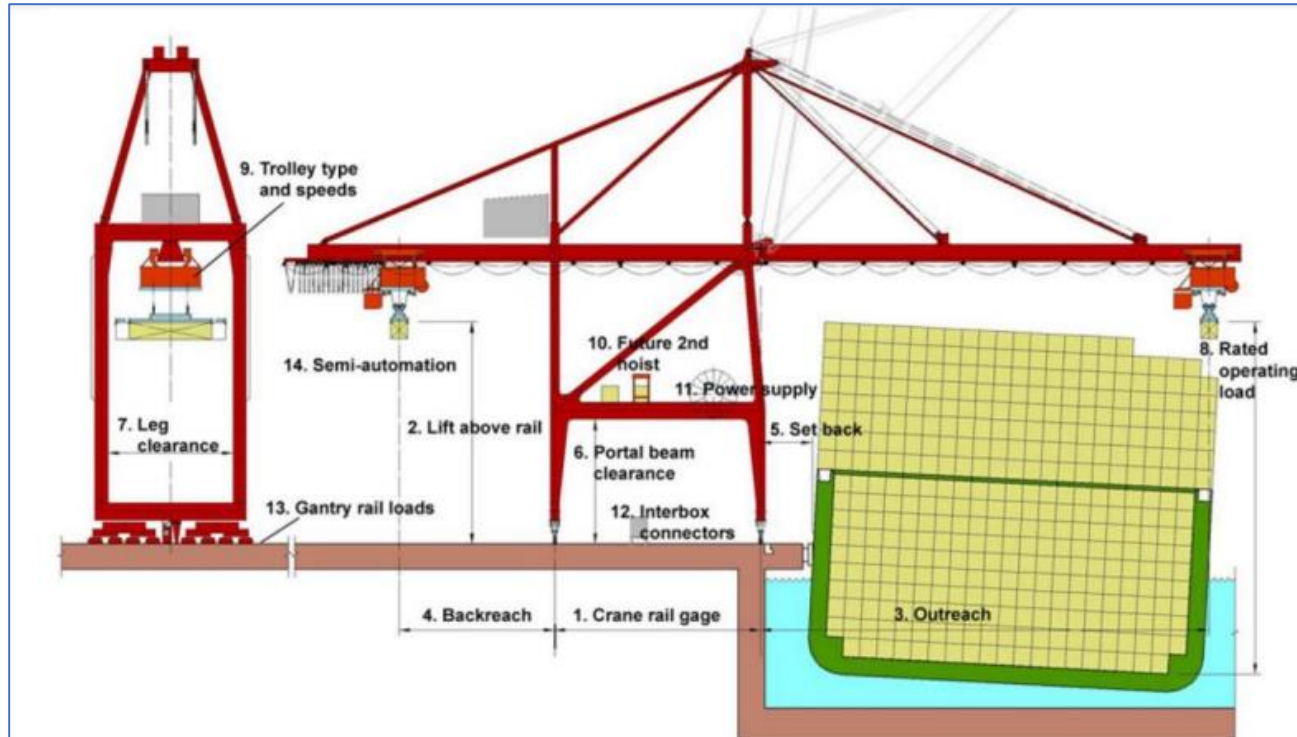




## Chapter 3 – Loading Procedures – Gears & Lifting Tools

### 3 Loading/Offloading Options (depends on operated Terminal equipment)

#### Option A: Gantry Crane



#### Advantages

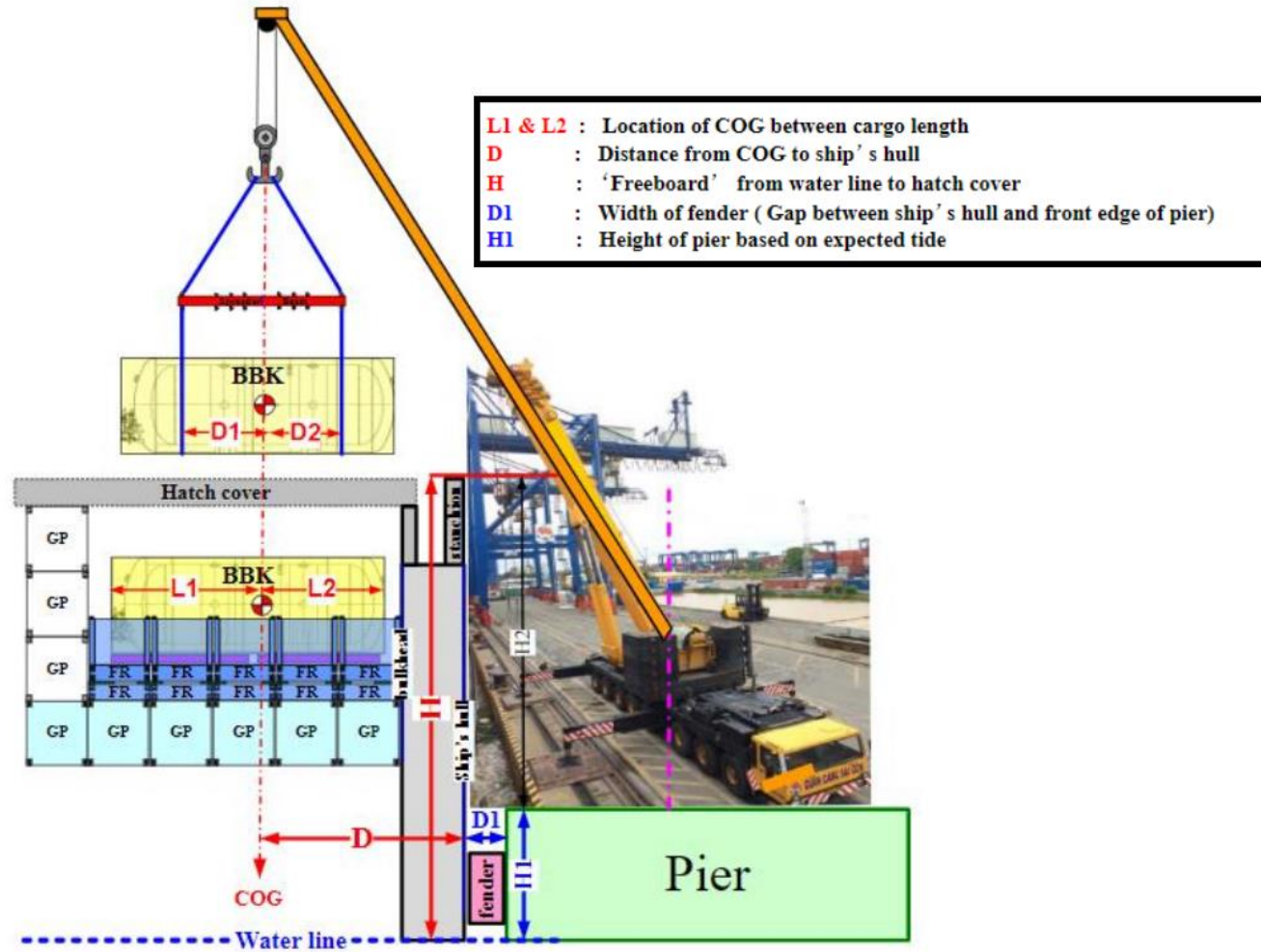
- ➔ Most cost-efficient handling
- ➔ Available in most ports

#### Disadvantages

- ➔ SWL 60-120Mtons Under-Hook +-
- ➔ Leg-Clearance (about +/- 16-17 m)
- ➔ Back-Reach (for very long cargo)

# Chapter 3 – Loading Procedures – Gears & Lifting Tools

## Option B: Mobile Crane(s)



### Advantages

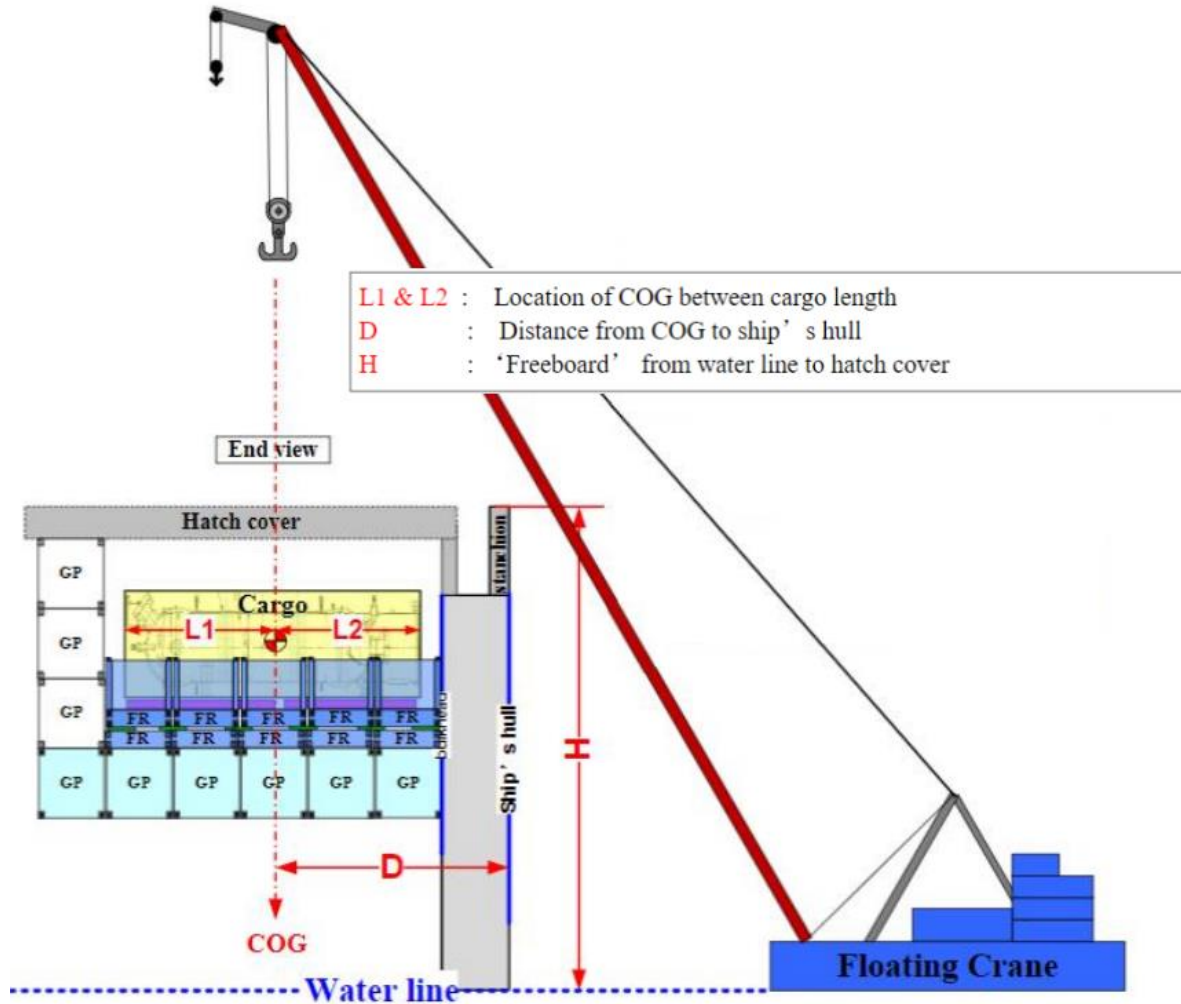
- Tandem-Lift to increase max. SWL
- Handling Cost Reasonable vs. Floating

### Disadvantages

- Not available in all ports
- Height Clearance + Crane Outreach

## Chapter 3 – Loading Procedures – Gears & Lifting Tools

### Option C: Floating Crane



### Advantages

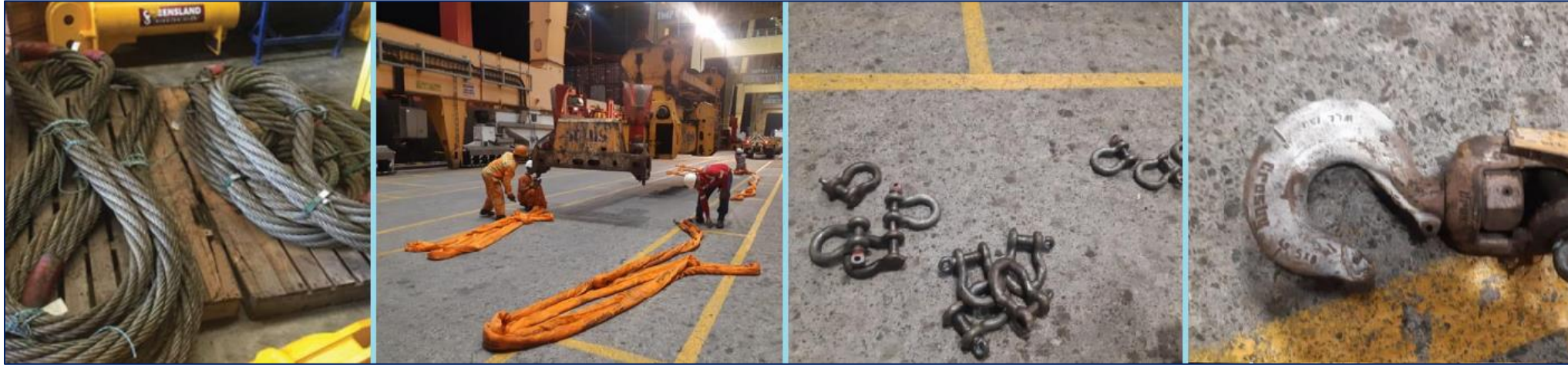
- ➔ Heavy-Lift (up to 2000mtons SWL)
- ➔ Greater Outreach Vs. Shore Cranes

### Disadvantages

- ➔ Most expensive handling solution
- ➔ Available mostly in main ports

## Chapter 3 – Loading Procedures – Gears & Lifting Tools

Lifting Gears (Spreaders, Grommets, Lifting Belts, Hooks, Shackles etc...)



- > Provided by Terminal
- > Securing on-board operated by Shore Gangs, under Chief Officer, Local Ops and Surveyor supervision
- > Lifting Gears may be provided by Shipper
- > Exotic Lifting Gears (ie, lifting baskets, others) may be provided by shipping line , sub. terminal approval

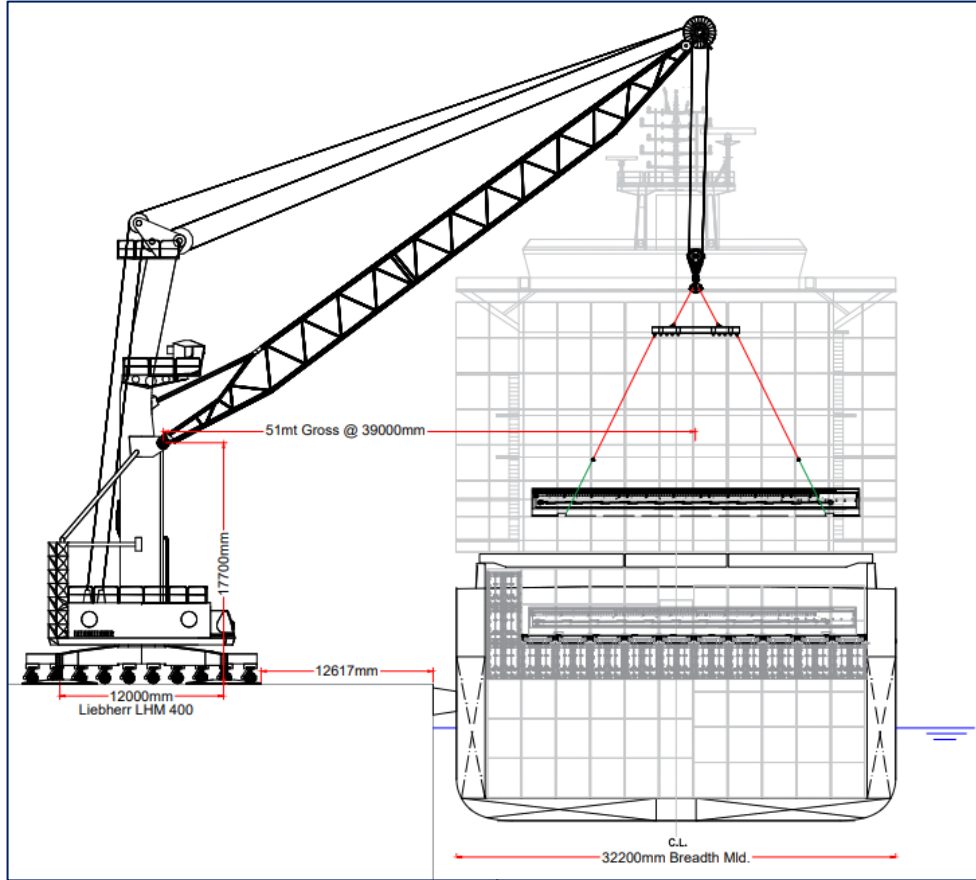


Lifting gears certificate always pre-checked and  
Made available to surveyor on-spot

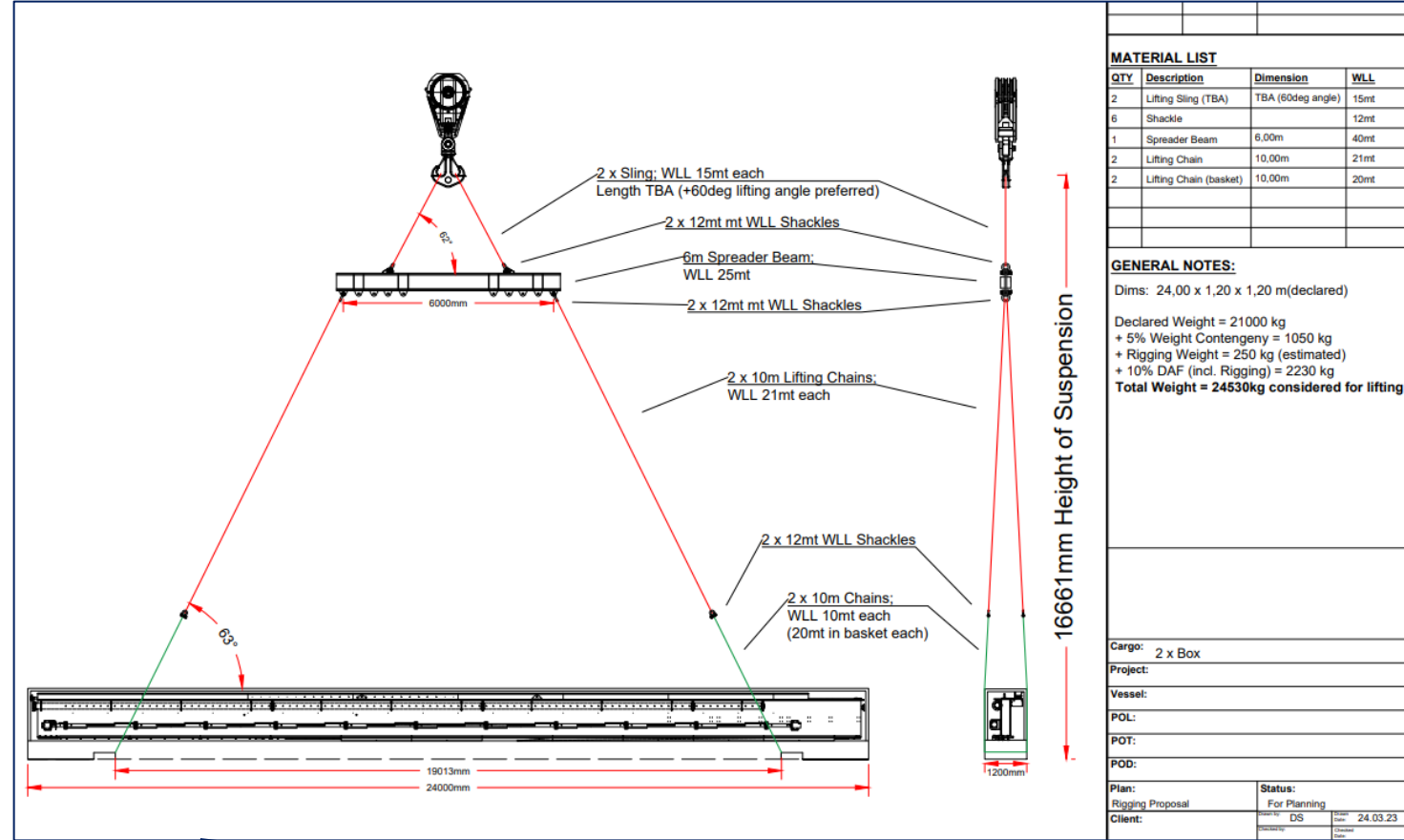


# Chapter 4 – Planning the process – Safety Considerations (Method Statement)

## Method Statement – Lifting Plan



Crane lifting plan with stowage overview



Detailed rigging arrangement

MATERIAL LIST			
QTY	Description	Dimension	WLL
2	Lifting Sling (TBA)	TBA (60deg angle)	15mt
6	Shackle		12mt
1	Spreader Beam	6.00m	40mt
2	Lifting Chain	10.00m	21mt
2	Lifting Chain (basket)	10.00m	20mt

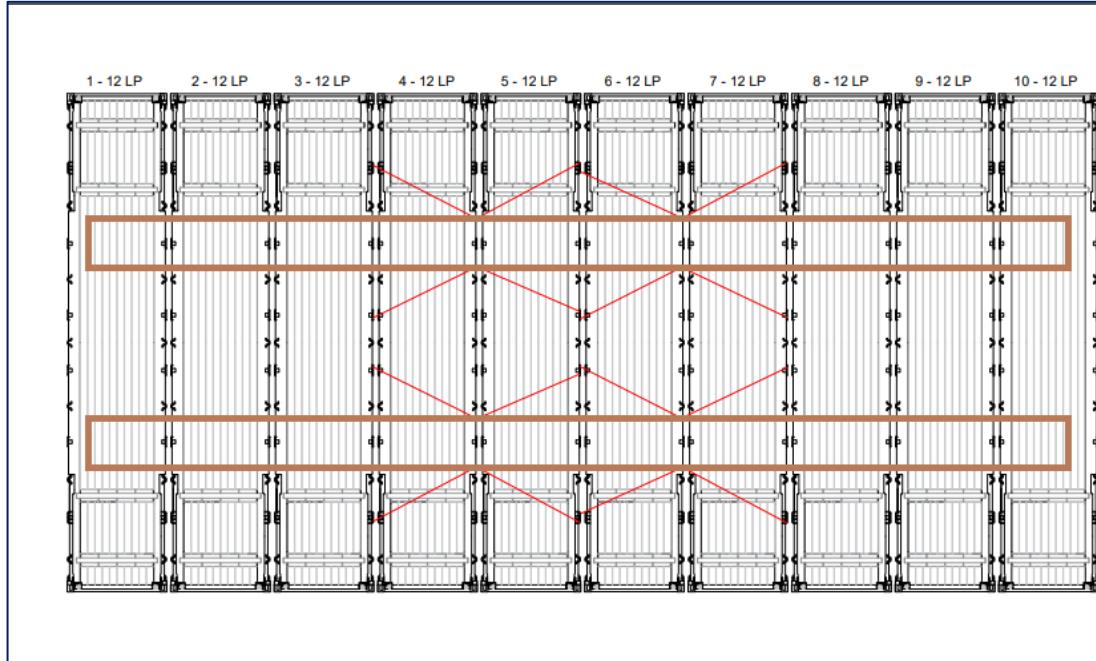
**GENERAL NOTES:**  
 Dims: 24,00 x 1,20 x 1,20 m(declared)

Declared Weight = 21000 kg  
 + 5% Weight Contengeny = 1050 kg  
 + Rigging Weight = 250 kg (estimated)  
 + 10% DAF (incl. Rigging) = 2230 kg  
**Total Weight = 24530kg considered for lifting**

Cargo:	2 x Box
Project:	
Vessel:	
POL:	
POT:	
POD:	
Plan:	For Planning
Rigging Proposal:	DS
Client:	24.03.23

# Chapter 4 – Planning the process – Safety Considerations (Method Statement)

## Method Statement – Lashing & Securing Plan



REVISION		
Rev. #	Edited By	Date

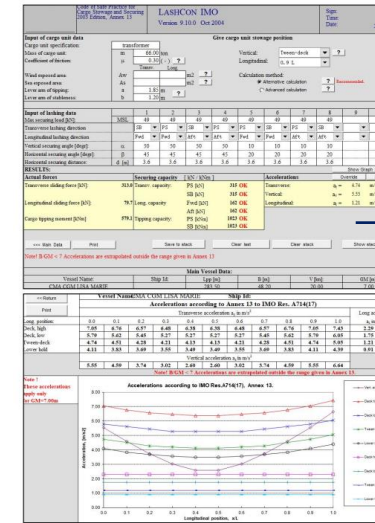
  

MATERIAL LIST			
QTY	Description	Dimension	WLL
8	Web Lashings	Various	49kN
	Anti-Sliding Mats		
	Cushioning Material		

**GENERAL NOTES:**  
 Dims: 24,00 x 1,20 x 1,20 m (declared)  
 Declared Weight = 21000 kg  
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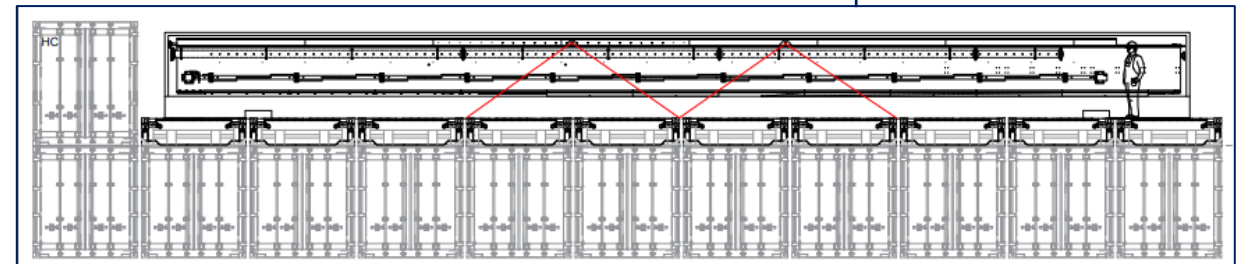
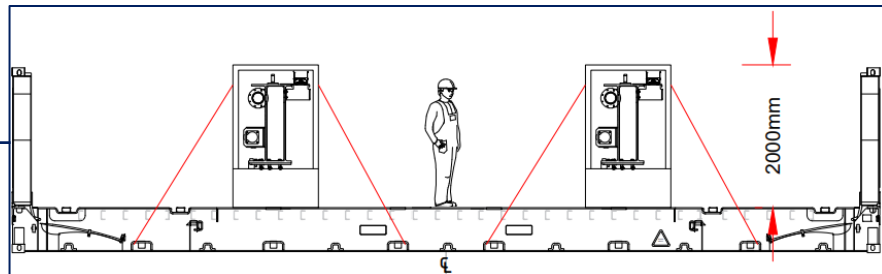
Top view lashing arrangement



Lashing Calculations

Front view lashing arrangement

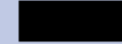
Side view lashing arrangement



## Chapter 5 – Advantages & Limitations of Breakbulk on Container Vessel



- Global Coverage
- Weekly Sailings (\*)
- Under-Deck Stowage
- No Dead-Freight & No Vessel Detention
- Capacity for Heavy-Loads on ports equipped of Floating Cranes (up to 400-500mtons)
- Capacity to handle routings with 1 or 2 T/S



- 1000's CBMs packing-lists (ie. Pipes).
- Pricing on the container freight market tendency
- Tailor-Made Solutions
- Reliance on Terminal equipment
- (\*) Breakbulk usually loaded on owned vessel

### BREKBUK CARGO ON CONTAINER VESSEL



Capacity to ship a full project packing-list, with combination BBK + OOG + DRY



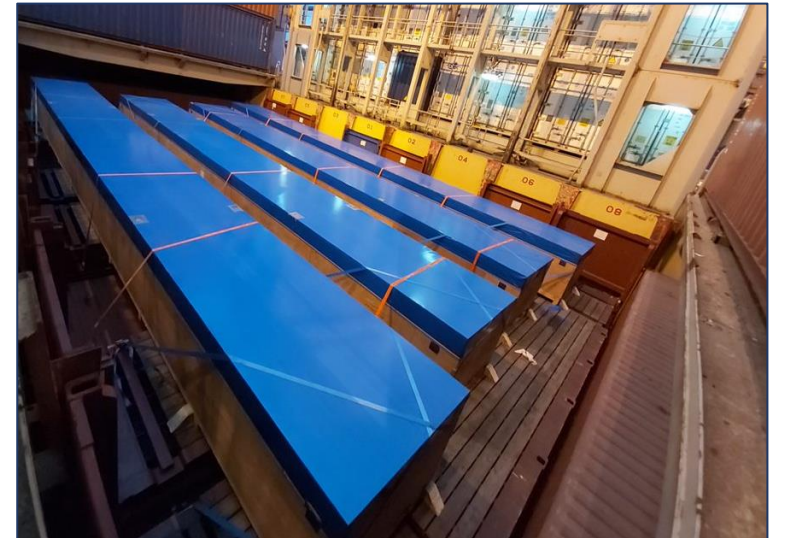
Break-Bulk Solution Tailor Made and will rely on POL/POT/POD lifting equipments



Dedicated Project Cargo Departments under constant improvement

## Chapter 6 – Breakbulk on Container Vessel – Lifting & Stowage Pictures

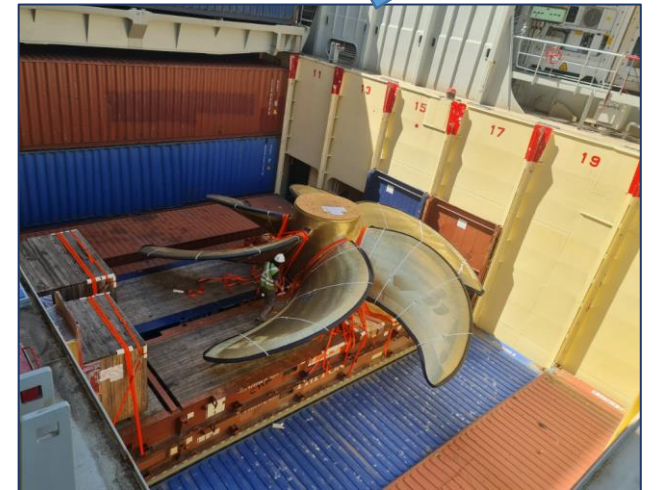
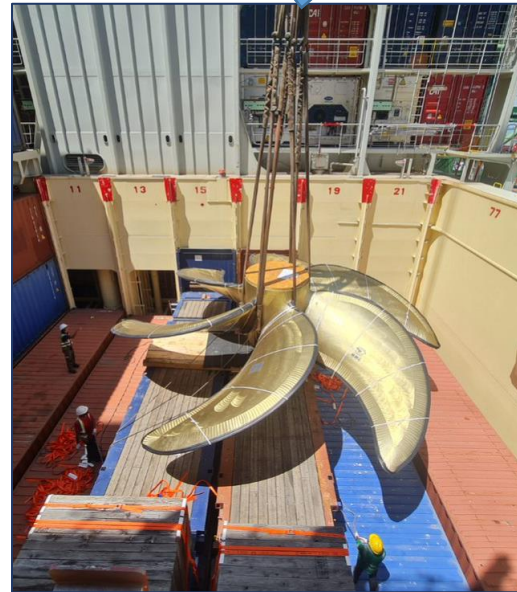
4x OVER-LENGTH CRATES – SHORE CRANE LIFTING + SECURING ONTO STANDARD 40FR BED





## Chapter 6 – Break-Bulk on Container Vessel – Lifting & Stowage Pictures

1x PROPELLOR – SHORE CRANE LIFTING + SECURING ONTO SANDWICH BED (4x 40FRs bed)



## Chapter 6 – Breakbulk on Container Vessel – Lifting & Stowage Pictures

2x REACTORS – FLOATING CRANE LIFTING + SECURING ONTO SANDWICH BED (22x 40FRs bed)



## Chapter 7 – Q&A



A presentation for

